

WHAT IS CLAIMED IS:

1. A vaccine against Newcastle Disease virus, comprising about 10^0 – 10^9 EID₅₀ of a mutant immunogen from the NDW strain of the Newcastle Disease virus, wherein said mutant immunogen lacks the antigenic binding site on the F glycoprotein recognized by the monoclonal antibody designated mAb 54.
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2. The vaccine as claimed in claim 1, wherein said mutant immunogen is serially passaged.
3. The vaccine as claimed in claim 2, wherein said serial passaging occurs in poultry eggs.
- 10 4. The vaccine as claimed in claim 3, wherein said serial passaging comprises at least about two and up to about ten serial passages.
5. The vaccine as claimed in claim 4, wherein said serial passaging comprises about four to about six serial passages.
6. The vaccine as claimed in claim 1, wherein said mutant immunogen is identified as p. 13, and is deposited at the CNCM in Paris, France under accession number I-2928.
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7. An immunogen of Newcastle Disease virus having the immunogenic characteristics of the strain deposited with the CNCM under accession number # I-2928.
- 20 8. A method of protecting a poultry animal from Newcastle Disease, which comprises administering to said animal about 10^0 – 10^9 EID₅₀ of a mutant immunogen from the NDW strain of the Newcastle Disease virus, wherein said mutant immunogen lacks the antigenic binding site on the F glycoprotein recognized by the monoclonal antibody mAb 54.
- 25 9. The method of claim 8, wherein about 10^4 – 10^9 EID₅₀ of mutant immunogen is administered.

10. A method of generating a Newcastle Disease virus mutant immunogen useful in a vaccine against Newcastle Disease, which comprises growing Newcastle Disease virus in the presence of the monoclonal antibody designated mAb 54, such that said mutant immunogen develops and grows in the presence of said
5 monoclonal antibody and is not neutralized by said monoclonal antibody.

11. The method of claim 11, wherein said Newcastle Disease virus is the NDW strain.

12. The method of claim 12, wherein said virus is grown in embryonated poultry eggs.

10 13. A mutant immunogen of Newcastle Disease virus wherein the F glycoprotein on said virus is derived from the partial nucleotide sequence shown in Seq. ID No.1, and further wherein said glycoprotein lacks the binding site for monoclonal antibody designated mAb 54.

15 14. A mutant immunogen having the amino acid sequence shown in Seq. ID No. 2.

15. An immunogen of Newcastle Disease virus having the immunogenic characteristics of the mutant immunogen with the amino acid sequence shown in Seq. ID No. 2.

20 16. A mutant immunogen of Newcastle Disease virus in which the amino acid serine is replaced by arginine at position 157.

17. An assay kit for detecting inoculation via a mutant immunogen against Newcastle Disease, comprising a standard NDV antigen and an illuminating antibody, wherein said illuminating antibody binds to said antigen in inoculated sera, but does not bind to said antigen in uninoculated sera.

25 18. The assay kit of claim 17, wherein said standard NDV antigen contains the F glycoprotein binding site and wherein said illuminating antibody binds to this site.

19. The assay kit of claim 18, wherein in said inoculated sera no antibodies against the F glycoprotein binding site will have been generated such that upon addition of said standard antigen containing the F glycoprotein binding site, the illuminating antibody is free to bind to said site.

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